Re: FCC 10-127 - Framework for Broadband Internet Service. Ex-parte comments by Lisa Pierce.

Background: I am a telecommunications industry analyst and was VP of Telecommunications Research at Forrester Research for over ten years. I now have my own firm, Strategic Networks Group (www.strategicnw.com). Prior relevant experience includes four years as an industry consultant in network signaling protocols, and nine years in new product market research, forecasting, product development and management for AT&T. In addition to my professional interest in Broadband and Internet access, my interest in this subject is personal, as I have been telecommuting on a full time basis for approximately 17 years.

Applicable Comments. In reviewing the NPRM, there are four major areas I want to comment on:

1. The 'Third Way', heavily featured in the NPRM (beginning in Section IIB) and in the Commission's powerpoint presentation concerning legal frameworks, will not be as effective as the FCC anticipates.
2. Affordable and unfettered broadband access doesn't necessarily require flat rate, unlimited use pricing (Section IIA).
3. A uniform regulatory approach is imperative (Section II, D and G).
4. Final Comments.

In Detail:

1. **The appropriateness and prospective effectiveness of a 'Third Way'.** In its June 17 2010 presentation on the Legal Framework for Broadband Internet Access, the Commission cites the rapid adoption of US mobile services as a proof-point of the effectiveness and wisdom of the third way. But these are the contraindications:
    a. According to the TIA, adoption of wireless services in other countries, even developed countries, has outstripped the pace in the U.S.—for instance, between 2001 and 2009, the number of wireless subscribers outside the U.S. surged by a factor exceeding 3X, while in the U.S. adoption merely doubled.[i] In many of those countries, the regulatory approach in effect was markedly different from the one taken in the US. Thus other factors, such technology innovations, the availability and price of substitute forms of communications, demographic shifts and other factors were key contributors to wireless' phenomenal growth.
    b. Even when considering US 3G services, the Third Way now is running into obstacles that the Commission, in this Notice, seeks to overcome. US 3G subscribers are not able to use any mobile device on any mobile provider, and they are not able to purchase and

use applications from any mobile application provider. Carriers, operating systems, and mobile device vendors now play significant gating roles to greater adoption and usage.

c. Finally, all US 3G providers have placed monthly usage caps on mobile devices (cap level often varies by type of device), and some have introduced, or suggested they will introduce tiered prices on 3G (and possibly 4G) services, so that heavy users pay more, and lighter users pay less.

2. **Price vs. use.** One of the major consumer and supplier concerns related to net neutrality focuses on broadband access prices. Many industry commentators have inferred that the Commission's response (to the D.C. Circuit Court's decision in the Comcast case) demonstrates that the Commission assumes that affordable and unfettered access requires a flat-rate, unlimited usage pricing structure. Such an assumption is not necessarily the case. But if it is, it discriminates in favor of heavy users (like those who make extensive use of peer-peer applications) over light users. Since adoption of internet access is growing and average use is becoming heavier, facilities-based Internet access providers face one of three realities:

   a. Charge all consumers the same fee for the same type of access (uplink/downlink bandwidth, latency, availability and packet loss characteristics, etc.). This is simple and straightforward. But it has the following consequences:

      (1) To provide a high level of user experience to everyone, providers will be forced to make significant and indiscriminant network investments. The only way for providers to do this profitably is to charge a relatively high price to *all* subscribers. This clearly would be a burden to many subscribers, and depending upon the new price level, would result in a number of broadband disconnections. This could also result in some loss of vibrancy in the application development and provider community.

      (2) The Commission could seek to subsidize the build out, upgrade and maintenance of facilities-based broadband infrastructure investment to a greater degree than it does today. It would only be able to do so if it allocated virtually all of the monies in the USF fund towards broadband. In this difficult, protracted economic environment, it is not feasible to increase the number, kind or amount of subscriber fees. As a tradeoff to public subsidization of broadband access and Internet services, many public advocates might seek greater regulation of these providers, a fate these providers have vigorously avoided.

   b. Absent price or subsidization incentives, broadband access providers lack motivation to make the necessary investments for their networks to support heavy users. Their broadband access prices won't necessarily be high. But either all users will suffer when heavy users engage in bandwidth-intensive activities, or providers will have to ration service to preserve the user experience of most subscribers at peak periods (e.g. the Comcast approach the Commission disfavors). Either consequence is undesireable.

c. Following a market-based approach, providers could charge heavy users more, and lighter users less. A different slant on a market-based approach is for heavy users and their applications providers to share the cost of network-intensive applications. Although not a perfect alternative, it provides the best tradeoffs to a variety of customers, to broadband access suppliers, and to the application development and provider communities.
    (1) A market-based approach encourages the widest adoption of broadband access and internet services, a long-sought Commission objective.
    (2) It allows facilities-based access providers to selectively and intelligently invest in infrastructure based on observed demand.
    (3) Higher access prices for heavy users acts to encourage these subscribers to perform some bandwidth-intensive activities during off peak times-times (when most local subscribers don't use the Internet).
    (4) Higher access prices may also incent applications developers and providers to construct/re-construct bandwidth-intensive applications to make light(er) use of network resources. By doing so, applications providers would be acting in their self interest—to reach the largest market possible, as quickly as possible.

3. Uniform regulatory treatment is paramount.

a. It is essential to consumers, access providers and applications developers and providers that one set of regulations and policies over Internet services and Broadband access continue. State-specific variations would only create disincentives to providers and the public.
b. Similarly, the FCC should seek to promulgate one set of regulations concerning broadband access and internet services, irrespective of the type of physical media (landline cable and DSL vs. satellite vs. fixed and mobile terrestrial wireless). Such distinctions do both the public and the provider ecosystems a disservice, and merit permanent, complete elimination. Doubtless, significant technology and economic differences are and will remain a fact of life. However, the existence of a single set of regulations provides the greatest clarity for consumers and levels the competitive playing field to the fullest extent possible. If one type of access is treated as an information service, then they all should be similarly classified (or telecom service, etc.). This way, regardless of type of access, a single set of provider and customer requirements and privileges exist. The subscriber may elect to use one type of access versus another based on important product attributes like availability, price, performance, customer support, the availability of additional services and features, provider viability, etc. The Commission is well aware that some urban demographics already favor both voice and data wireless services (2G, 3G and WiFi) as the primary (and often sole means) of telecommunications and internet connectivity. If 4G services become widely available, this trend will accelerate over the next five to ten years. Thus a single, uniform approach to different types of high-speed Internet access is imperative.

4. **Final Comments.** In this NPRM, the Commission seeks legal justification to clarify and expand its control over broadband access and Internet services. In so doing, it employs an incremental approach. But from a big picture perspective, the entire telecommunications regulatory infrastructure has needed a complete overhaul since the late 1980s/early 1990s. This is the era during which carriers widely deployed digital (TDM) telecommunications infrastructures. I have witnessed firsthand much of the regulatory framework, methodology and pricing assumptions made at the state and federal levels. When closely examined, these still assume the continuation of an analog infrastructure. Analog-based regulatory, policy and pricing practices applied to the TDM and packet-based digital age have been outmoded for decades, and the market has suffered accordingly—in price, availability, competition, performance and customer service/support. The country has also suffered -- from the perspective of international competitiveness. Despite the necessity of an overhaul, no Commission, Congress or President has taken the leadership position to further our country's interests. I concur that the Commission's approach taken in this NPRM is the expedient one. But realistically, it is the equivalent of putting a band aid on a patient that needs quadruple bypass. As a taxpayer, I have to ask why the Commission would spend any public resources on such a futile outcome.

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[i] According to the Telecommunications Industry Association, there were 41.5 M wireless subscribers in the US in 2001, and 87.1 M in 2009 (slightly more than 100% growth). Outside the US, the number of wireless subscribers was 839 M in 2001, and grew more than 3X by 2009, to 3.456 B.